Abstract:

Title: Assessment of the timing of tennis strokes using kinematic analysis and surface electromyography

Aims: Assess the timing of tennis forhand, service and appropriate training exercises using kinematic analysis. Describe the activation of muscles in time for the chosen execution of the strokes by recording surface electromyography (SEMG). Compare the results of various executions and describe the differences between using the racquets with different parameters and between executions of various training exercises.

Method: Case study using kinematic analysis and surface electromyography was made.

Results: We have found out that the execution of the strokes using the players own racquet was the most stable. We have found the differences in timing while using various racquets. The heavier the equipment we are using in training exercise is the more different is the timing of this movement. We concluded that the chosen training exercises are inappropriate as the special exercises to improve coordination.

Key words: tennis, timing, service, forhand, electromyographic analysis, kinematic analysis